2SB1679G

Silicon PNP epitaxial planar type

For low-frequency amplification

■ Features

- Large collector output capacitance (Common base, input open circuited) C_{ob}
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing

■ Package

- Code
  SMini3-F2
- Marking Symbol: 3V
- Pin Name
  1. Base
  2. Emitter
  3. Collector

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	−15	V
Collector-emitter voltage (Base open)	V_{CEO}	−10	V
Emitter-base voltage (Collector open)	V_{EBO}	−7	V
Collector current	I_C	− 0.5	A
Peak collector current	I_{CP}	−1	A
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

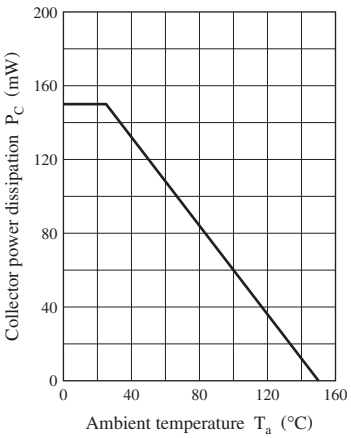
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -10$ µA, $I_E = 0$	−15			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1$ mA, $I_B = 0$	−10			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10$ µA, $I_C = 0$	−7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -10$ V, $I_E = 0$			−100	nA
Forward current transfer ratio *1	h_{FE1} *2	$V_{CE} = -2$ V, $I_C = -0.5$ A	130		350	—
	h_{FE2}	$V_{CE} = -2$ V, $I_C = -1$ A	60			
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = -0.4$ A, $I_B = -8$ mA		− 0.16	− 0.30	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = -0.4$ A, $I_B = -8$ mA		− 0.8	−1.2	V
Transition frequency	f_T	$V_{CB} = -10$ V, $I_E = 50$ mA, f = 200 MHz		130		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, f = 1 MHz		22		pF

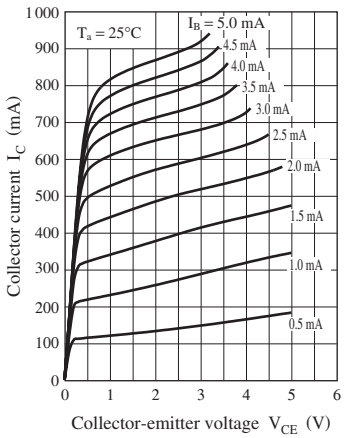
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. ∗1: Pulse measurement
∗2: Rank classification

Rank	R	S
h_{FE1}	130 to 220	180 to 350

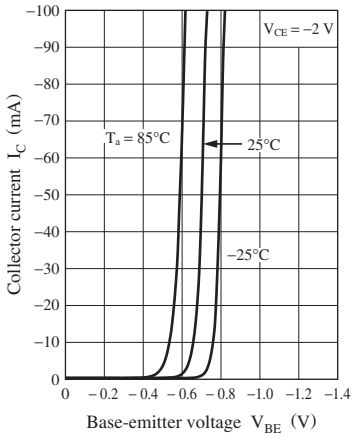
P_C — T_a



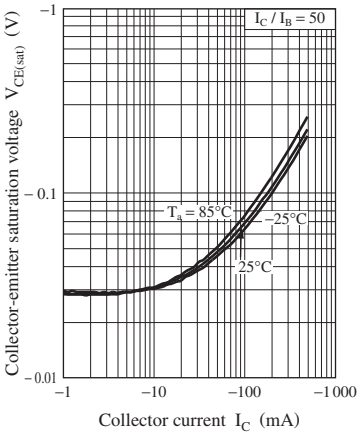
I_C — V_{CE}



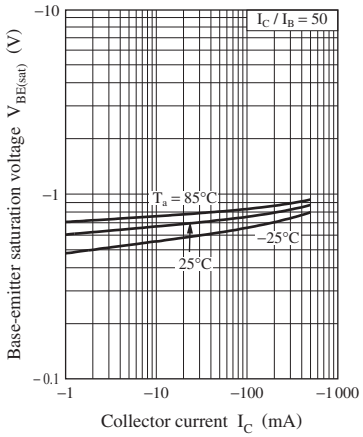
I_C — V_{BE}



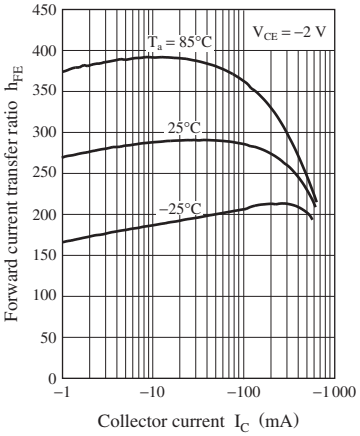
$V_{CE(sat)}$ — I_C



$V_{BE(sat)}$ — I_C

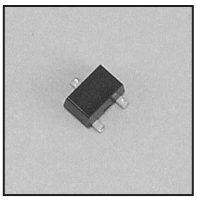


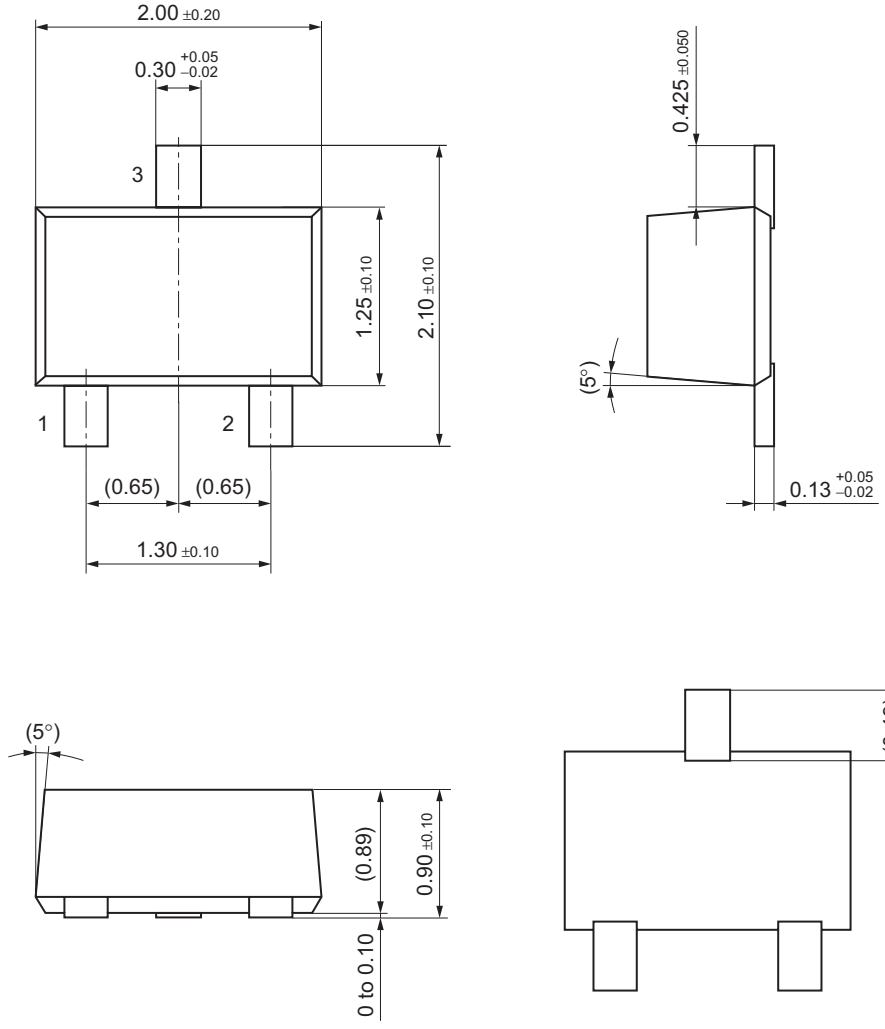
h_{FE} — I_C



SMini3-F2

Unit: mm





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